AUTODOC CLUB

How to change engine oil and filter on **BMW E46 touring** – replacement guide

VIDEO TUTORIAL

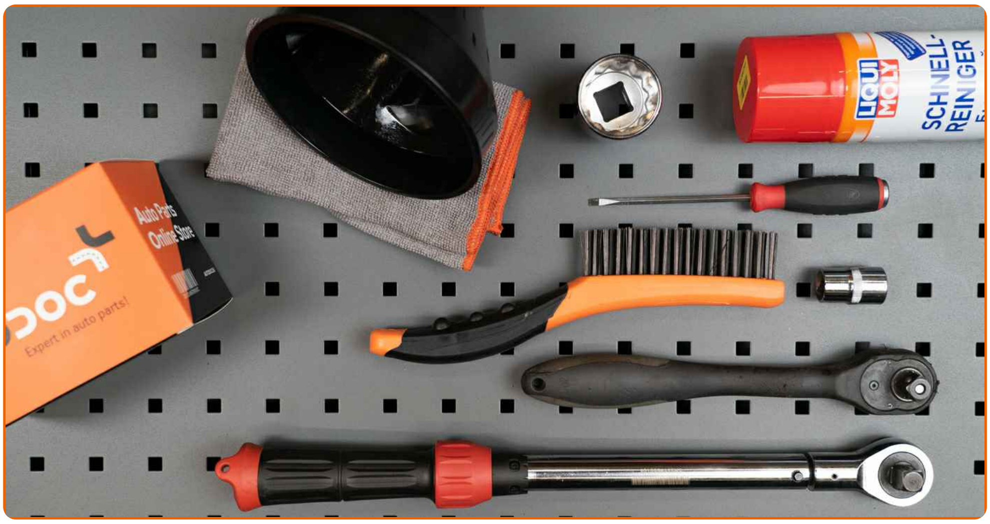


Important!

This replacement procedure can be used for:
BMW 7 (E38) 730d 2.9, BMW 5 Saloon (E39) 530d 3.0, BMW 5 Touring (E39) 530d 3.0, BMW X5 (E53) 3.0 d, BMW 3 Saloon (E46) 330d 2.9, BMW 5 Saloon (E39) 525d 2.5, BMW 5 Touring (E39) 525d 2.5, BMW 3 Touring (E46) 330xd 2.9, BMW 3 Saloon (E46) 330xd 2.9

The steps may slightly vary depending on the car design.

REPLACEMENT: ENGINE OIL AND FILTER – BMW E46 TOURING. TOOLS YOU MIGHT NEED:



- Wire brush
- All-purpose cleaning spray
- Drive socket # 17
- Drive socket # 36
- Ratchet wrench
- Torque wrench
- Flat Screwdriver
- Funnel
- Oil drain pan
- Microfibre towel
- Fender cover

BUY TOOLS

AUTODOC recommends:

- Replace the oil filter every time when changing motor oil.
- All work should be done with the engine stopped.
- Wear gloves to prevent contact with hot liquid.

REPLACEMENT: ENGINE OIL AND FILTER – BMW E46 TOURING. RECOMMENDED SEQUENCE OF STEPS:

1 Open the hood.



2 Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.



3 Unscrew the oil filler plug.



4 Lift the car using a jack or place it over an inspection pit.



Replacement: engine oil and filter – BMW E46 touring. Tip:

- The vehicle must be on even keel, and if it is at an angle, the drain plug must be at the lowest point.

5 Clean the area of the oil pan drainage hole. Use a wire brush. Use all-purpose cleaning spray.



6 Unscrew the drain plug. Use a drive socket #17. Use a ratchet wrench.



7 Put a waste oil container with at least 7 l capacity under the drainage hole.



8 Drain the used oil.



Replacement: engine oil and filter – BMW E46 touring. Professionals recommend:

- Caution! The oil may be hot.

9 Unscrew the oil filter. Use a drive socket #36.



10 Remove the oil filter.



11 Prepare a container for the old oil filter. Put the old oil filter in the container.



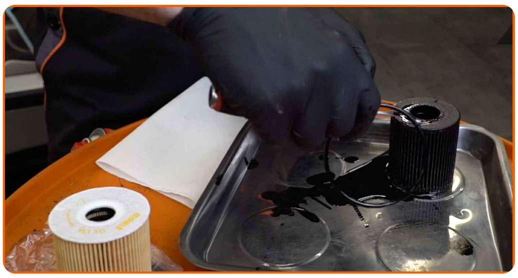
Replacement: engine oil and filter – BMW E46 touring. Tip from AUTODOC:

- Move up the container. The oil starts to drain out of the drainage hole immediately after you have removed the oil filter.

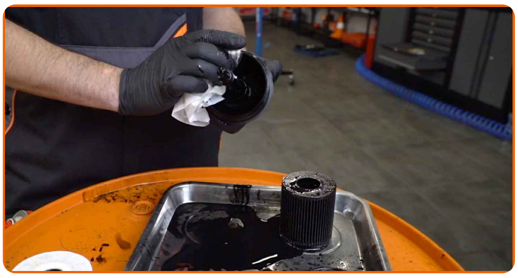
12 Cover the oil filter housing with a microfibre towel to prevent dirt and foreign objects from getting into the system.

13 Detach the oil filter from the filter cover.

14 Remove the oil filter cover O-ring. Use a flat screwdriver.



15 Clean the oil filter housing cap. Use all-purpose cleaning spray.



16 Install a new O-ring to its mounting seat on the filter cover.



17 Install the new oil filter to the mounting seat on the filter cover.

Please note!

- Make sure to install the filter correctly. Don't mix up the sides of the part.

18 Remove the microfibre towel from the oil filter housing.

19 Clean the oil filter seat.

20 Lubricate the rubber seal of the new filter with a little amount of fresh oil.

21 Screw the new filter into its place.



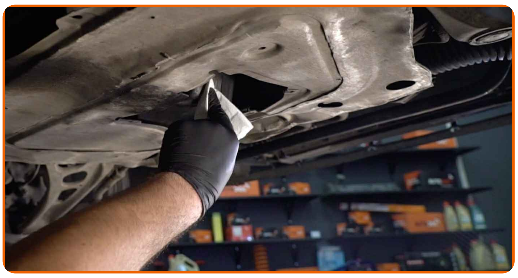
22 Screw the cap. Use a drive socket #36. Use a torque wrench. Tighten it to 25 Nm torque.



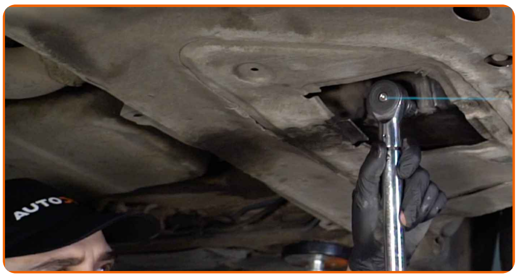
Replacement: engine oil and filter – BMW E46 touring. Tip from AUTODOC experts:

- Wait until the oil has completely drained from the drainage hole.

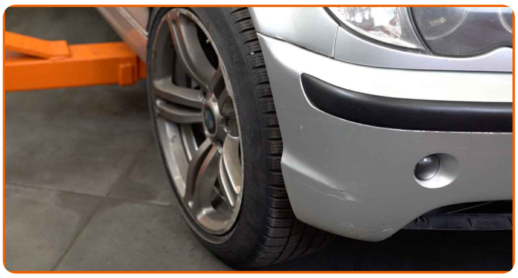
23 Clean the area of the oil pan drainage hole.



24 Screw in the new drainage plug and tighten it. Use a drive socket #17. Use a torque wrench. Tighten it to 25 Nm torque.



25 Lower the car.



26 Remove the oil filler cap. Insert the funnel.



27 Pour oil into the engine through the filler. Required amount of oil: 6.5 L.



Replacement: engine oil and filter – BMW E46 touring. AUTODOC experts recommend:

- Use the oil recommended by the manufacturer.

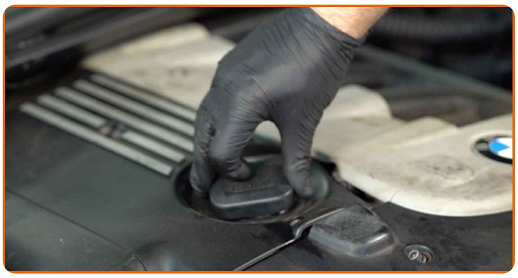
28 Check the oil level using the dipstick. Top up oil if necessary.



Please note!

- The oil level should be between the Min and Max marks.

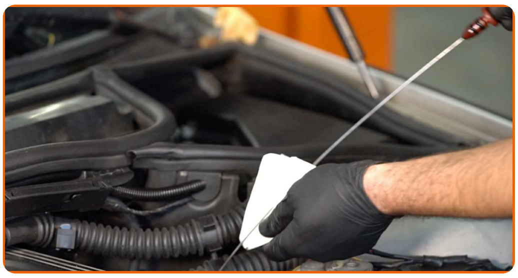
29 Tighten the oil filler cap.



30 Run the engine for a few minutes. After the oil pressure warning light goes out, stop the engine.



31 Check the oil level 5 minutes after the stop of the engine operation using a dipstick and add oil if necessary.



Replacement: engine oil and filter – BMW E46 touring. AUTODOC recommends:

- The oil level should be between the Min and Max marks.
- Make sure that the oil filler cap is properly tightened.
- Check the threaded plug of the drainage hole and the oil filter seal for tightness. If necessary, carefully tighten them up.

32 Remove the fender protection cover.



33 Close the hood.



Replacement: engine oil and filter – BMW E46 touring. Tip from AUTODOC:

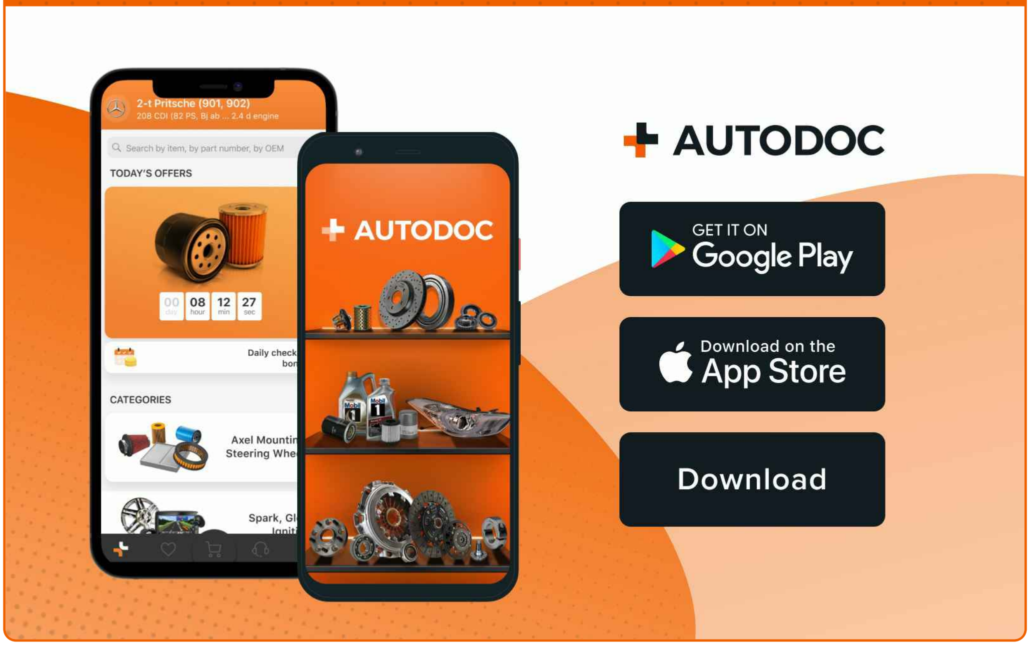
- Note that oil pressure warning light, which indicates insufficient pressure in the lubrication system, may be on for a longer time than usual. After a few seconds, the oil will fill all the channels, and the light will go out.
- To protect the environment from pollution, be sure to dispose of the used filters at special collection points.

WELL DONE!

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